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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/025,454	12/26/2001	Giulio Cavalli	3606-0119P	2938
2292	7590	11/29/2005	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			ODOM, CURTIS B	
			ART UNIT	PAPER NUMBER
			2634	

DATE MAILED: 11/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/025,454

Applicant(s)

CAVALLI ET AL.

Examiner

Curtis B. Odom

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 11-18 are objected to because of the following informalities: The word “signaling” is suggested to be changed to “signaling”.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 15 and 16 recite the limitations "the decision distances" and “said switching levels”. There is insufficient antecedent basis for this limitation in the claims.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 12-14, 17, and 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vembu (U. S. Patent No. 6, 259, 928) in view of Hall (U. S. Patent No. 5, 991, 618).

Regarding claim 12, Vembu discloses a method to adaptively control the phy mode of the transmissions from a peripheral station to a master station (column 4, lines 14-48) in either a point-to-multipoint or point-to-point transmission system with automatic transmit power control, called ATPC, and comprising the steps of:

receiving (column 5, lines 41-54), at the peripheral station, power control signaling messages from the master station and regulating the transmitted power;

receiving (column 6, lines 45-58) , at the peripheral station, phy mode switching messages from the master station and changing the phy mode of the transmission;

transmitting (column 7, lines 12-28, adjusting power in the tracking mode) the power control signaling messages from the master station to keep the received power inside the ATPC range;

transmitting (column 6, line 66-column 7, line 42) a phy mode switching message from the master station in case the received power level (received signal strength, column 5, lines 18-32 and column 9, lines 5-12) reaches either a lower or a higher switching threshold (wherein the threshold is a range of values, see column 7, lines 37-42) associated with each phy mode (burst mode and tracking mode) used by the peripheral station for its transmissions, in order to command switching from a less robust and more efficient phy mode (burst mode, column 6, lines 34-44) to a more robust and less efficient phy mode (tracking mode), or vice versa, in a way to establish a hysteresis cycle between the switching thresholds;

transmitting (column 6, lines 11-24) the power control signaling messages from the master station in order to keep the received mean power substantially close to a reference received power level (threshold) or working point predefined for each phy mode;

Vembu does not disclose checking if the peripheral station has sufficient available transmission power in order to guarantee the transmission using the less robust phy mode with such a power level that allows the master station to receive the transmitted signal above the working point of the less robust phy mode; and transmitting in case the check is affirmative a phy mode switching message towards a less robust and more efficient phy mode.

Hall discloses a power control method which checks if one communication station has sufficient available transmission power in order to guarantee the transmission using the less robust phy mode with such a power level that allows a second communication station to receive the transmitted signal above the working point of the less robust phy mode; and transmitting in case the check is affirmative a phy mode switching message towards a less robust and more efficient phy mode (column 3, lines 55-column 4, line 60). Hall discloses a request for a change in communication mode (phy mode) and the determination of whether the request can be met in terms of transmission power (column 4, lines 4-36). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the method of Vembu with the teachings of Hall in order to check transmission power before switching modes because if the switch were performed but could not be supported in terms of transmission power then there could be a loss of information during the transmission. Hall also discloses that this process can be used as an indication of system performance and detection of problems with certain communication (phy) modes (column 4, lines 31-60).

Regarding claim 13, which inherits the limitations of claim 12, Vembu discloses the working point of each phy mode is set by adding a margin, constant and independent from the phy mode, to the threshold level of the corresponding phy mode (column 11, lines 17-25).

Regarding claim 14, which inherits the limitations of claim 12, Vembu discloses the working point (nominal point with regards to threshold), dependent on the phy mode, is set by equalizing the performances in terms of bit error rate (column 10, lines 1-column 11, line 45) of each phy mode to a constant value (normal bit error rate), the constant value being independent on the used phy mode and being coincident with the required performance.

Regarding claim 17, which inherits the limitations of claim 12, Vembu and Hall do not disclose checking if the peripheral station has sufficient available power is performed by the master station by reading its own memory where the information is stored. However, Hall does disclose checking if the peripheral station has sufficient available power is performed by one communication device upon the reception of this information (power margin) from a second communication device (column 6, lines 35-61), wherein the power margin is transmitted to the infrastructure (the first communication device). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to store this information (power margin) for future applications to conserve the power of transmitting the information each time it is need to check for available power.

Regarding claim 18, which inherits the limitations of claim 12, Hall further discloses checking if the peripheral station has sufficient available power is performed by one communication device upon the reception of this information (power margin) from a second

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communication device (column 6, lines 35-61), wherein the power margin is transmitted to the infrastructure.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Curtis B. Odom whose telephone number is 571-272-3046. The examiner can normally be reached on Monday- Friday, 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 571-272-3056. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Curtis Odom
November 23, 2005



STEPHEN CHIN
SUPERVISORY PATENT EXAMINE
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